

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1 – 37. (Canceled)

38. (Currently amended) A computer readable storage medium bearing a computer readable representation of ~~an object~~, a plurality of objects wherein ~~said each~~ object comprises primitive and non-primitive members, and computer executable instructions that when executed by a processor cause respective objects to be ~~wherein said object is~~ serialized for retrieval by computer hardware, the computer readable representation comprising:

a plurality of fragments representing the plurality of objects the plurality of fragments including:

at least one binary fragment associated with ~~said an~~ object, ~~said each~~ binary fragment comprising a binary fragment header and a binary fragment payload, wherein the binary fragment payload includes a plurality of primitive data members of ~~said the associated~~ object, and wherein the binary fragment payload is devoid of any non-primitive members of ~~said the associated~~ object, and wherein the binary fragment header comprises a type field including a number of fragment property bits including a member type bit indicating if all members are primitives, and a self-terminating bit indicating if the associated object is represented within one fragment; and

at least one additional fragment comprising at least one non-primitive member of said an object, the additional fragment including an additional field describing the at least one non-primitive member by including at least one attribute of the non-primitive member

~~wherein said plurality of primitive data members in the binary fragment payload represent all of the primitive data members associated with said object,~~

~~wherein said plurality of primitive data members are in a storage engine record format,~~

~~wherein the binary fragment header comprises a type field and a length field, and~~

~~wherein the type field indicates that the binary fragment payload is devoid of any non-primitive data members.~~

39. (Canceled)
40. (Currently amended) The computer readable storage medium of claim 38, wherein said at least one additional fragment comprises:
- at least one Large Object (LOB) fragment comprising a LOB fragment header and a LOB fragment payload,
  - wherein the LOB header comprises a LOB type field, a value type field, and a LOB length field,
  - wherein the LOB type field indicates the LOB fragment is a LOB fragment,
  - wherein the value type field indicates whether the LOB fragment payload comprises an inline LOB or a pointer to a LOB location, and
  - wherein the LOB length field indicates a length of the LOB fragment payload.
41. (Currently amended) The computer readable storage medium of claim 40, wherein the LOB fragment payload comprises a LOB.
42. (Currently amended) The computer readable storage medium of claim 40, wherein the LOB fragment payload comprises a pointer to a LOB location.
43. (Currently amended) The computer readable storage medium of claim 40, wherein the value type field indicates whether the LOB fragment payload comprises an inline LOB, a pointer to a LOB location, or a cell reference.
44. (Currently amended) The computer readable storage medium of claim 38, further comprising a terminator fragment that marks the end of the object, said terminator fragment comprising a terminator type field indicating the terminator fragment is a terminator fragment.
45. (Currently amended) The computer readable storage medium of claim 38, wherein said at least one additional fragment comprises:
- a collection start fragment comprising a collection start header,

wherein the collection start header comprises a collection start type field and a bit field,

wherein the collection start type field indicates the collection start fragment is a collection start fragment, and

wherein the bit field indicates whether an order exists among a plurality of collection element fragments.

46. (Currently amended) The computer readable storage medium of claim 45, further comprising:

at least one collection element fragment comprising a collection element header and collection element payload,

wherein the collection element header comprises a collection element type field and a collection element length field,

wherein the collection element type field indicates the collection element fragment is a collection element fragment, and

wherein the collection element length field indicates ~~the~~ a length of the collection element payload.

47. (Currently amended) The computer readable storage medium of claim 46, wherein the collection element payload comprises a data member in a collection of data members corresponding to said collection start fragment.

48. (Currently amended) The computer readable storage medium of claim 46, wherein the collection element header further comprises a collection element locator field that provides a unique location of a data member in a collection of data members.

49. (Currently amended) A computer readable storage medium bearing a computer readable representation of ~~an object~~, a plurality of objects and computer executable instructions that when executed by a processor cause respective objects to be ~~that is~~ serialized for efficient retrieval by computer hardware, the computer readable representation comprising:

a plurality of fragments representing the plurality of objects the plurality of fragments including:

- at least one Large Object (LOB) fragment associated with an object, each  
LOB fragment comprising a LOB fragment header and a LOB fragment payload, wherein the LOB fragment header comprises a LOB type field, a value type field, and a LOB length field, wherein the LOB type field ~~indicates the LOB fragment is a LOB fragment,~~ includes a number of fragment property bits including a member type bit indicating that the LOB fragment is a LOB fragment, and a bit indicating if the LOB fragment is the first fragment of a plurality of fragments representing the associated object, wherein the value type field indicates whether the LOB fragment payload comprises an inline LOB or a pointer to a LOB location, and wherein the LOB length field indicates a length of the LOB fragment payload; and
- a collection start fragment associated with an object, each collection start  
fragment comprising a collection start header, wherein the collection start header comprises a collection start type field and a bit field, wherein the collection start type field includes a number of fragment property bits including a member type bit ~~indicates~~ indicating that the collection start fragment is a collection start fragment, and a self-terminating bit indicating if the associated object is represented within one fragment, and wherein the bit field indicates a property of a collection in one of a plurality of collection element fragments, wherein the bit field further indicates whether an order exists among the plurality of collection element fragments; and the plurality of collection element fragments associated with said collection start fragment, wherein each of the plurality of collection element fragments comprises a collection element header and a collection element payload, and wherein each collection element payload comprises a data member of a collection element data type, said collection element data type comprising data of a same type as every collection element associated with said collection start fragment.

50-53. (Canceled)

54. (Currently amended) The computer readable storage medium of claim 49,  
wherein the collection element header comprises a collection element type field and a  
collection element length field,  
wherein the collection element type field indicates the collection element fragment is  
a collection element fragment, and  
wherein the collection element length field indicates a length of the collection element  
payload.

55. (Currently amended) A computer readable storage medium bearing a computer  
readable representation of an object and computer executable instructions that when executed  
by a processor cause the object to be ~~that is~~ serialized for efficient retrieval by computer  
hardware, the computer readable representation comprising:  
a collection start fragment comprising a collection start header,  
wherein the collection start header comprises a collection start type field and a bit  
field,  
wherein the collection start type field indicates the collection start fragment is a  
collection start fragment,  
wherein the bit field indicates a property of a collection in one of a plurality of  
collection element fragments, and  
wherein the bit field further indicates whether an order exists among the plurality of  
collection element fragments; and  
the plurality of collection element fragments associated with said collection start  
fragment, each of said collection element fragments comprising a collection element header  
and a collection element payload,  
wherein each collection element payload comprises only a data member of a  
collection element data type, said collection element data type comprising data of a same type  
as every collection element associated with said collection start fragment,  
wherein the collection element header comprises a collection element type field and a  
collection element length field,

wherein the collection element type field indicates the collection element fragment is a collection element fragment, and

wherein the collection element length field indicates the a length of the collection element payload.

56. (Canceled)

57. (Currently amended) The computer readable storage medium of claim 55, wherein the collection element header further comprises a collection element locator field that provides a unique location of a data member in a collection of data members.

58. (Currently amended) A computer readable storage medium bearing a computer readable representation of an object and computer executable instructions that when executed by a processor cause the object to be ~~that is~~ serialized for efficient retrieval by computer hardware, the computer readable representation comprising:

a binary fragment associated with said object, said binary fragment comprising a binary fragment header and a binary fragment payload, wherein the binary fragment payload includes a plurality of primitive data members of said object and is devoid of any non-primitive members of said object, and wherein the binary fragment header comprises a type field including a number of fragment property bits including a member type bit indicating if all members are primitive, and a self-terminating bit indicating if said object is represented within one fragment,

wherein said plurality of primitive data members in the binary fragment payload represent all of the primitive data members associated with said object,

~~wherein said plurality of primitive data members are in a storage engine record format,~~

~~wherein the binary fragment header comprises a type field and a length field, and~~

~~wherein the type field indicates that the binary fragment is the only fragment of the object and that the binary fragment payload is devoid of any non-primitive data members.~~